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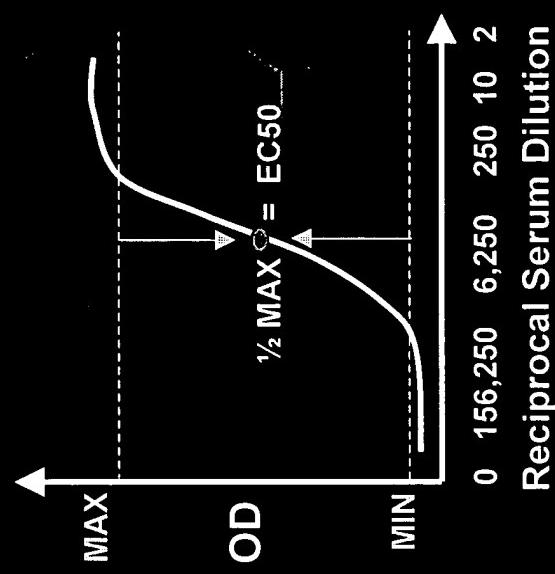
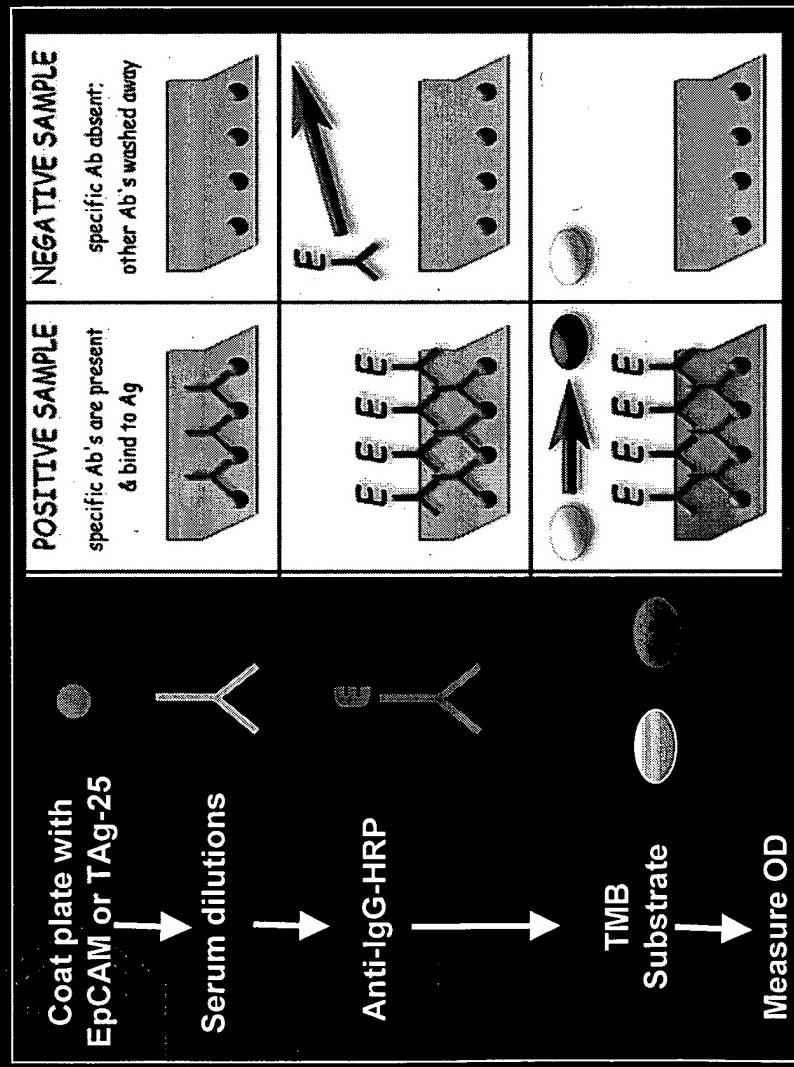
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Patent Appn: "Novel Tumor-Associated Antigens"
Inventors: Punningen et al.
Attorney Docket No. 334.210

Figure 1



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Figure 2

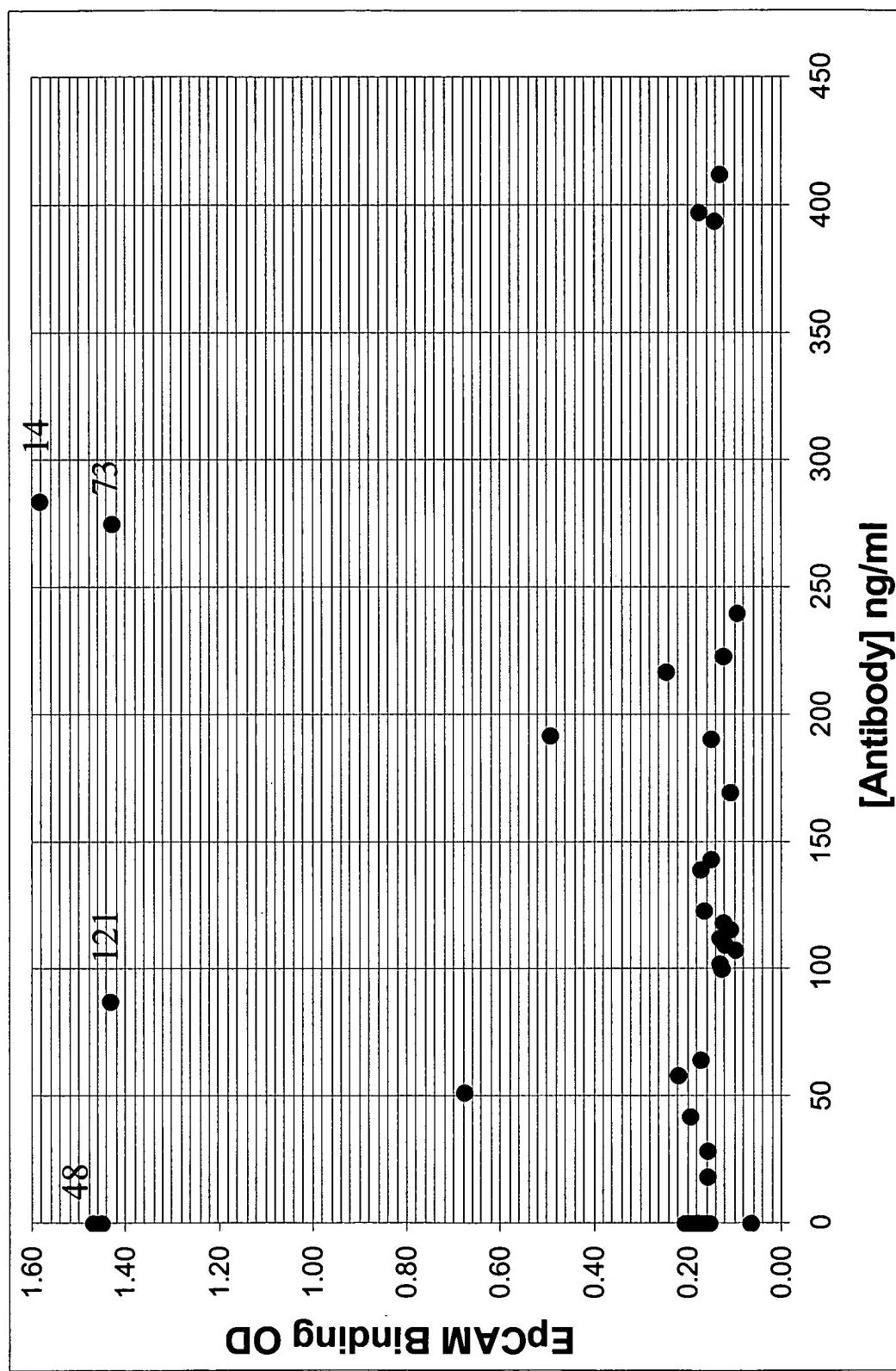


Figure 3

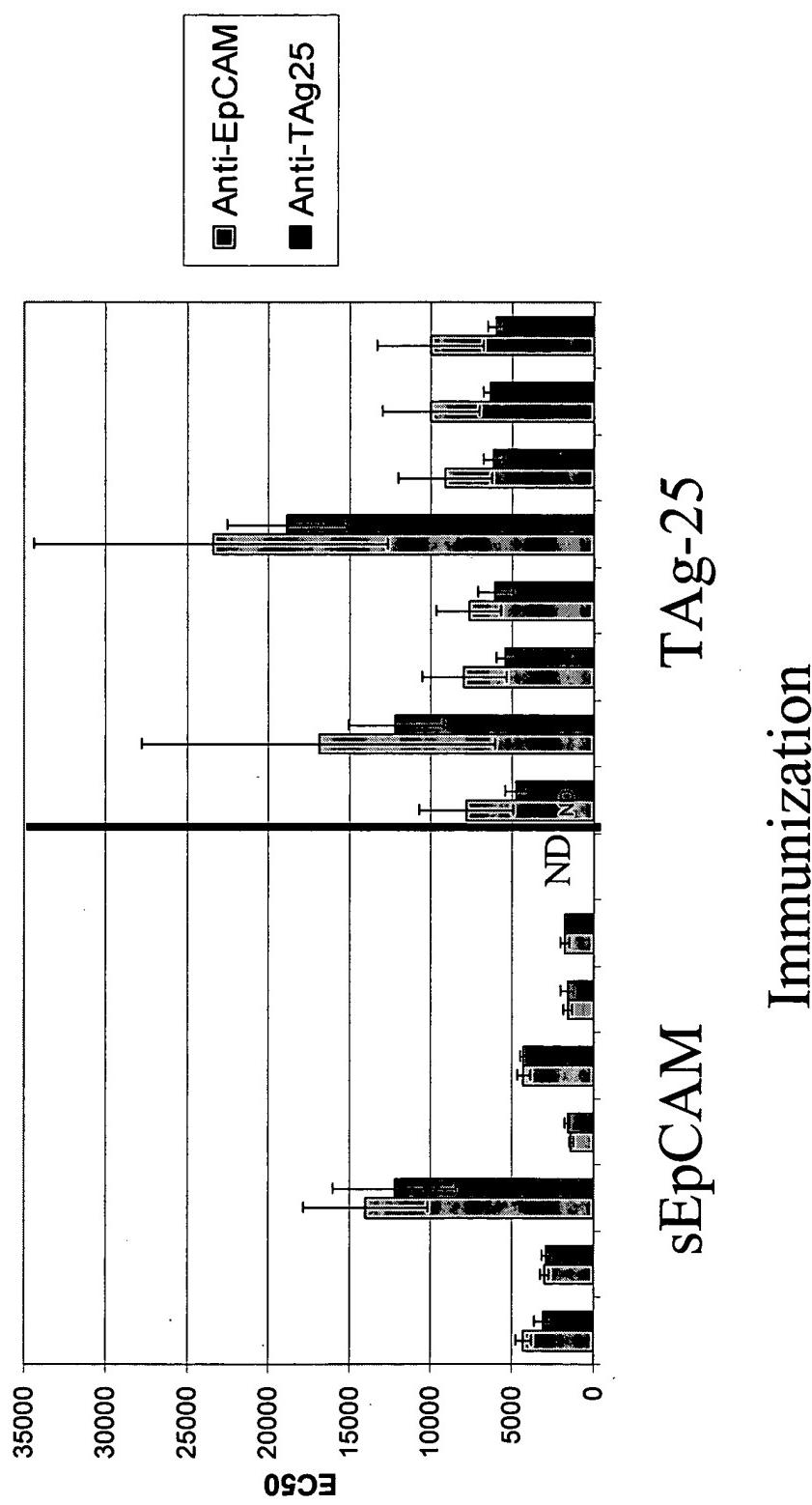


Figure 4

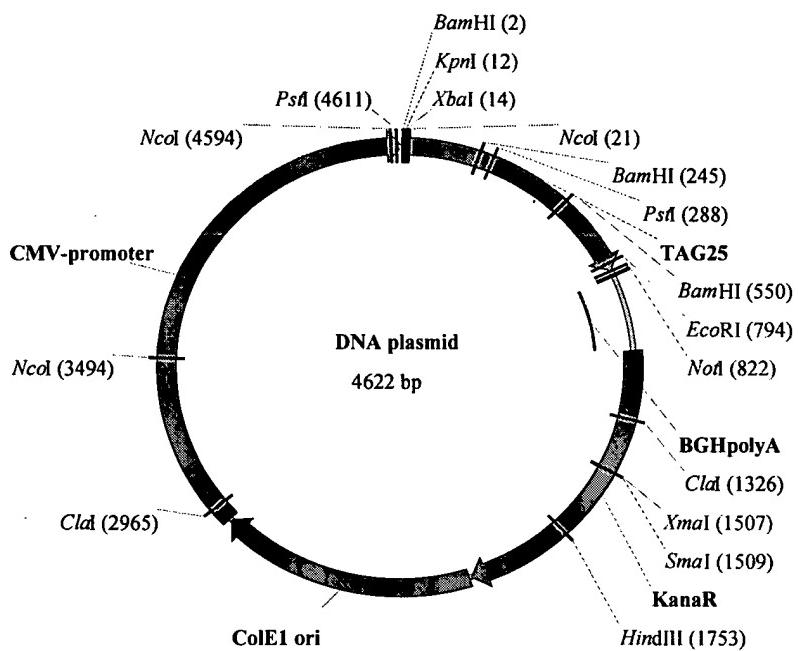
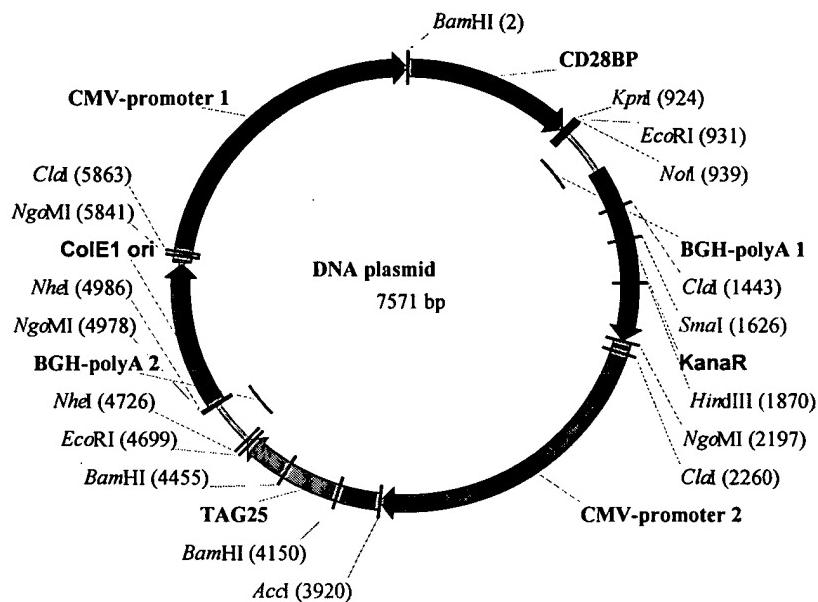


Figure 5



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Figure 6

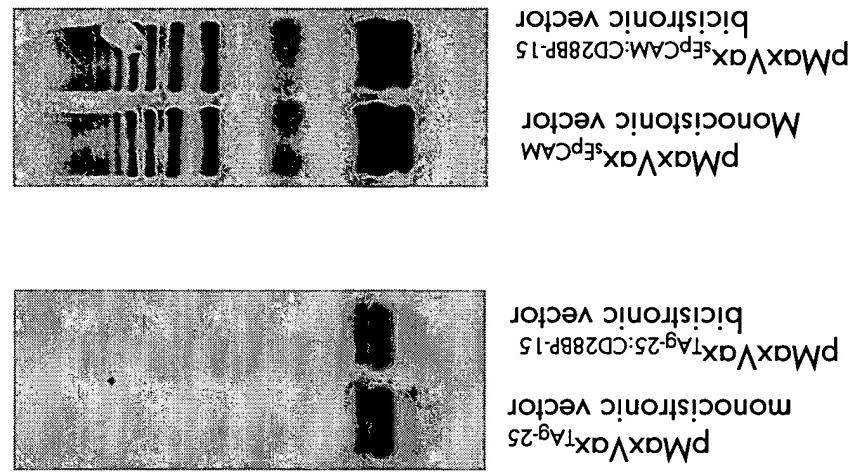


Figure 7

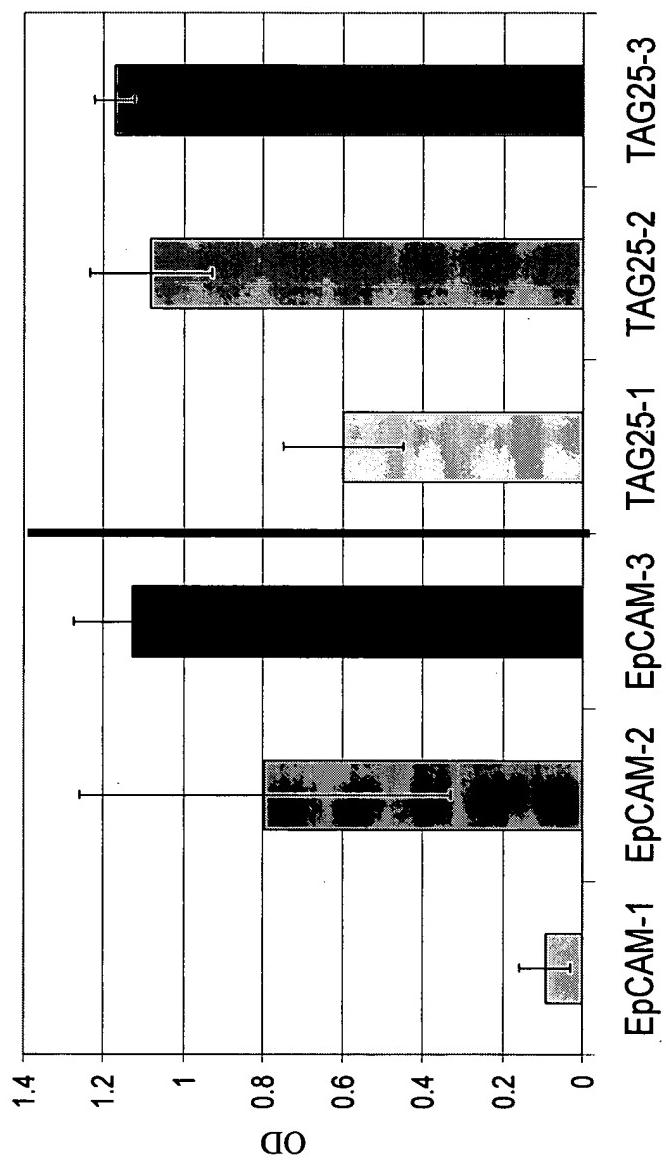
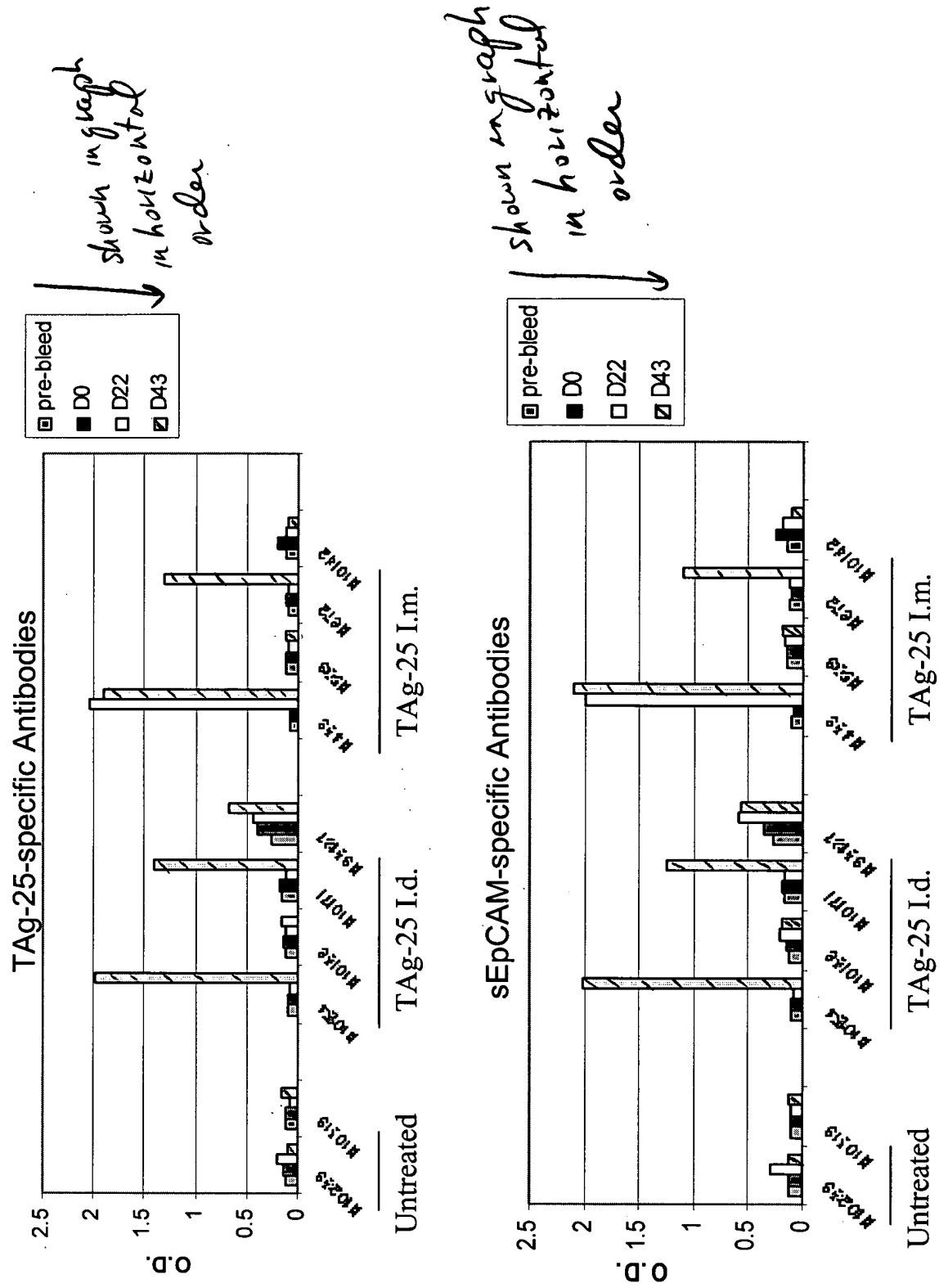
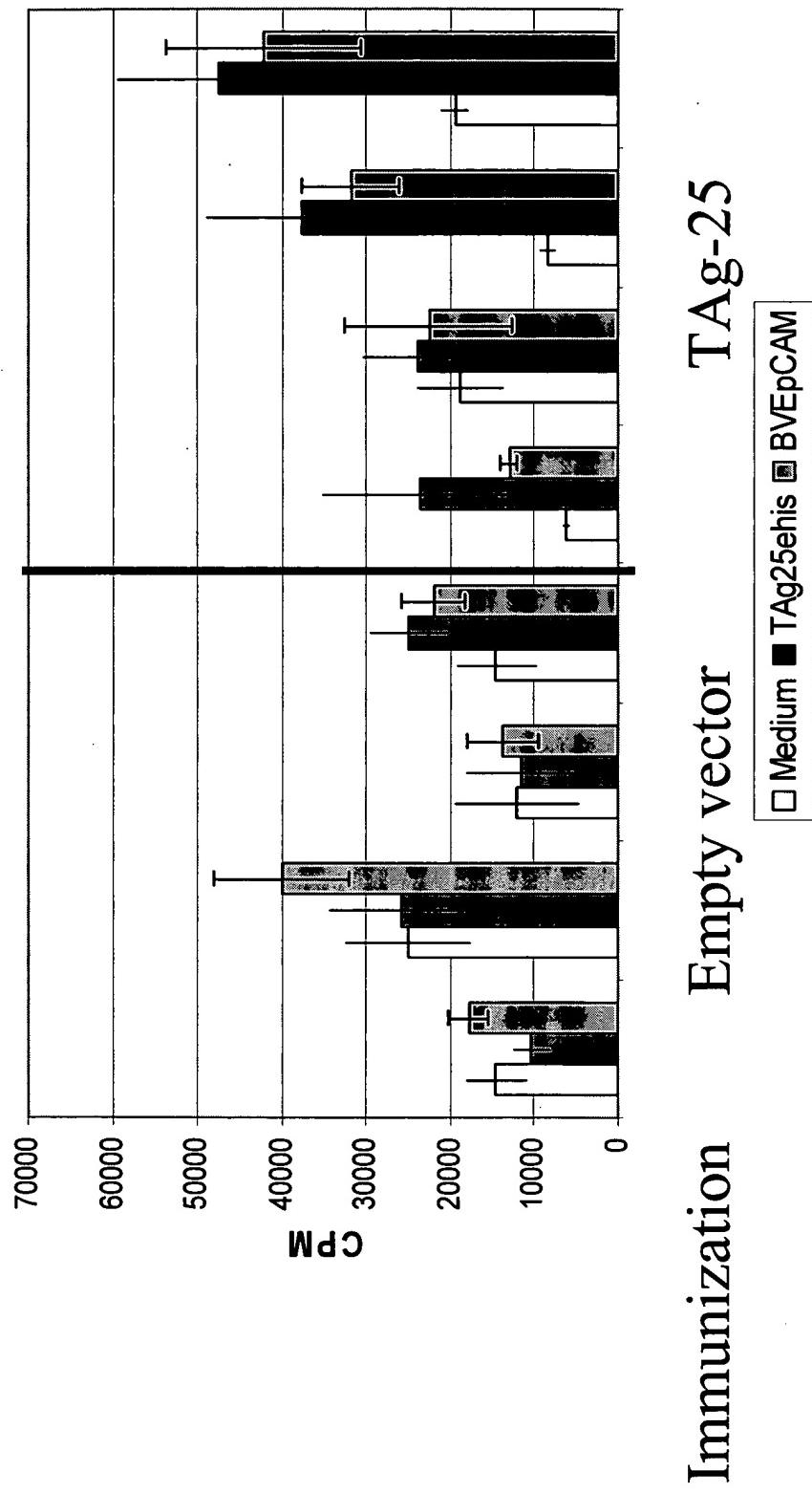


Figure 8



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Figure 9A



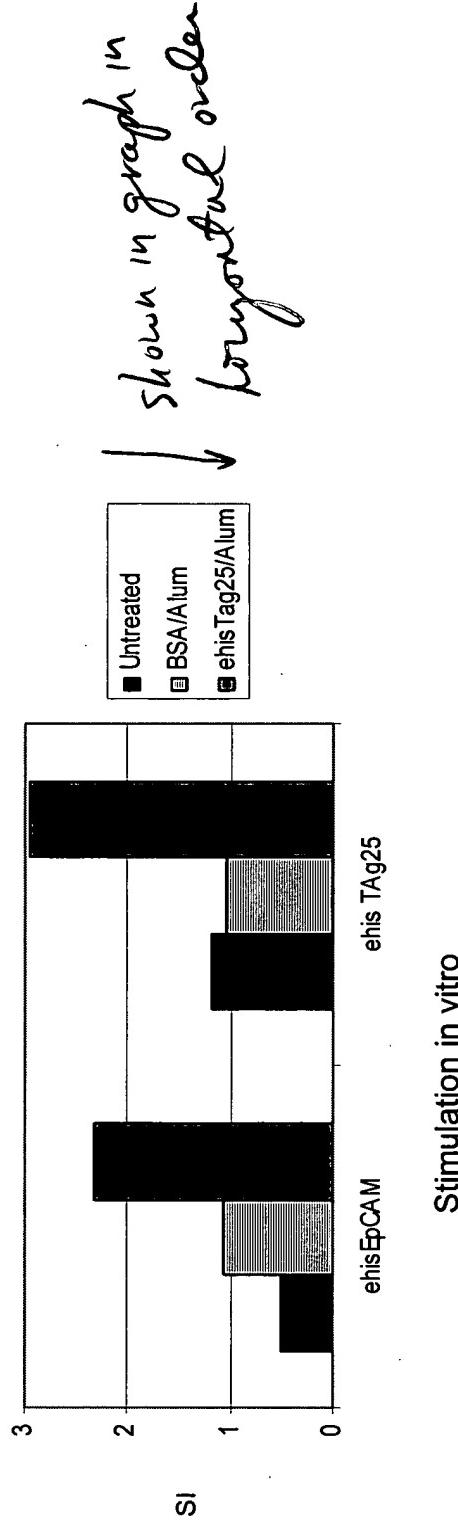
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Figure 9B

Protein Vaccine:



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Figures 10A and 10B

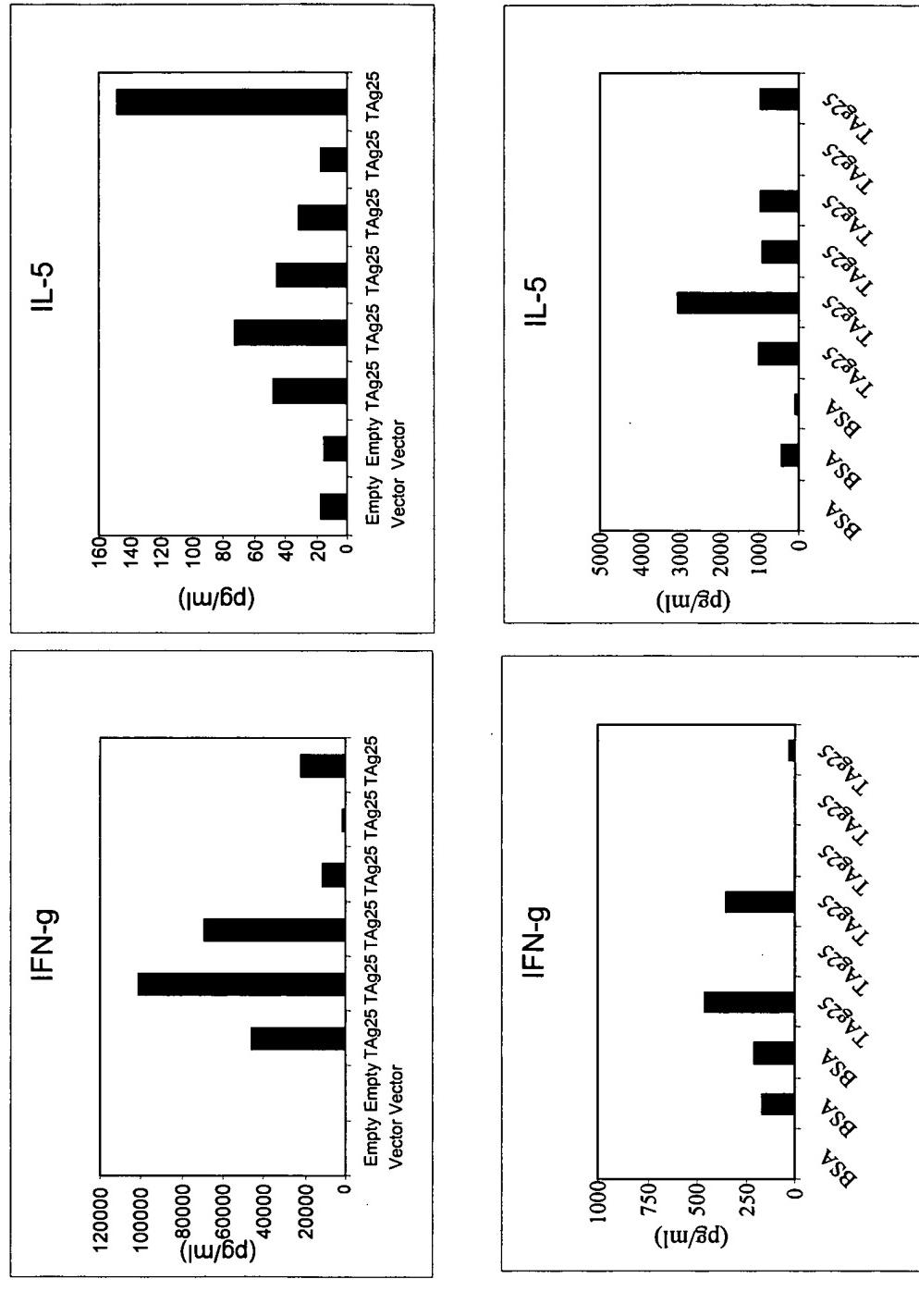


Figure 11

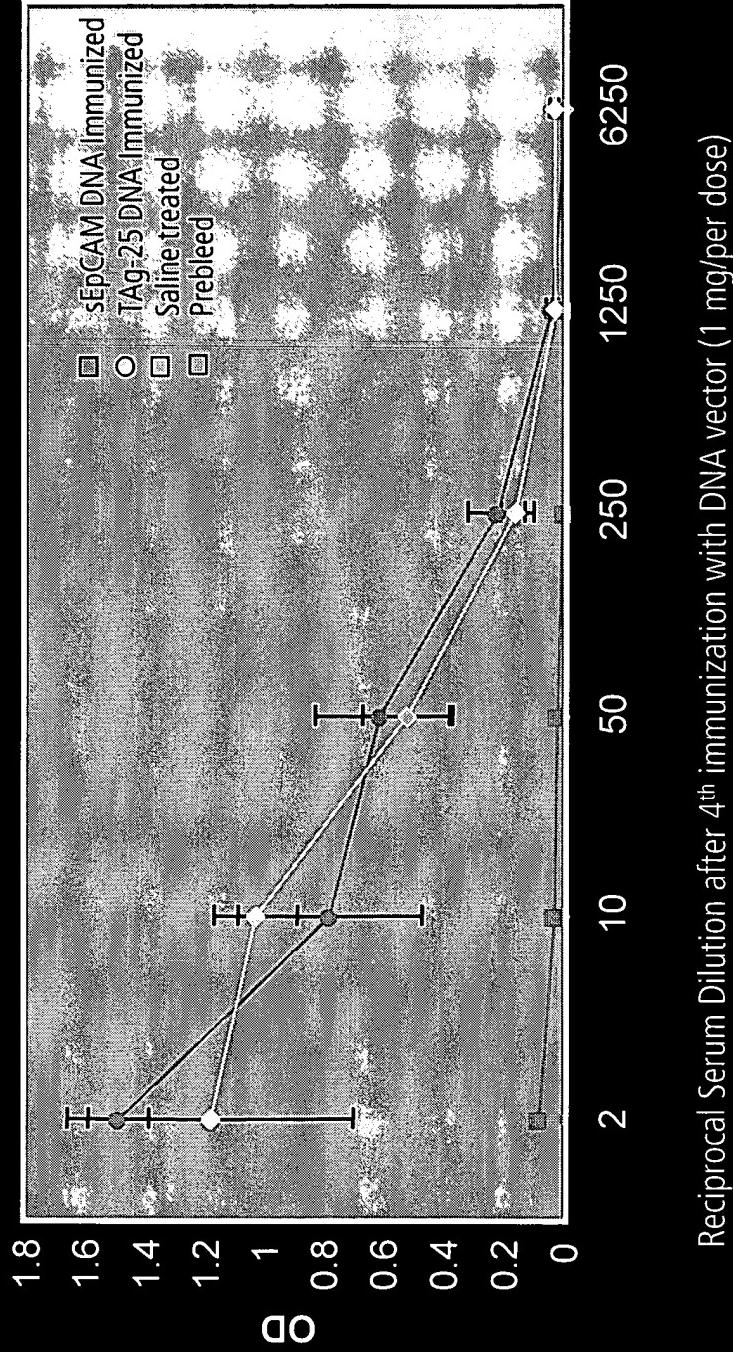
DNA Treatment	Route	Pre-bleed		1st DNA		2nd DNA		3rd DNA		4th DNA	
		Responders to EpCAM	Responders to TAG25								
Saline	im	0	0	0	0	0	0	0	0	0	0
EpCAM	id	0	0	0	0	1	1	3	3	3	3
EpCAM	im	0	0	1	0	2	2	2	2	2	2
TAG25	id	0	0	0	0	0	0	3	3	3	3
TAG25	im	0	0	0	1	1	4	4	4	4	4

Monkeys were designated to be responders if their serum contained antibody levels that gave an EC50 of ≥ 5 or an OD value of ≥ 0.5 at a 1/10 serum dilution by ELISA for either EpCAM or TAG25

The number of responders is out of a total maximum of 4 for EpCAM or TAG25 treated groups or 2 for the saline treated group

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Figure 12

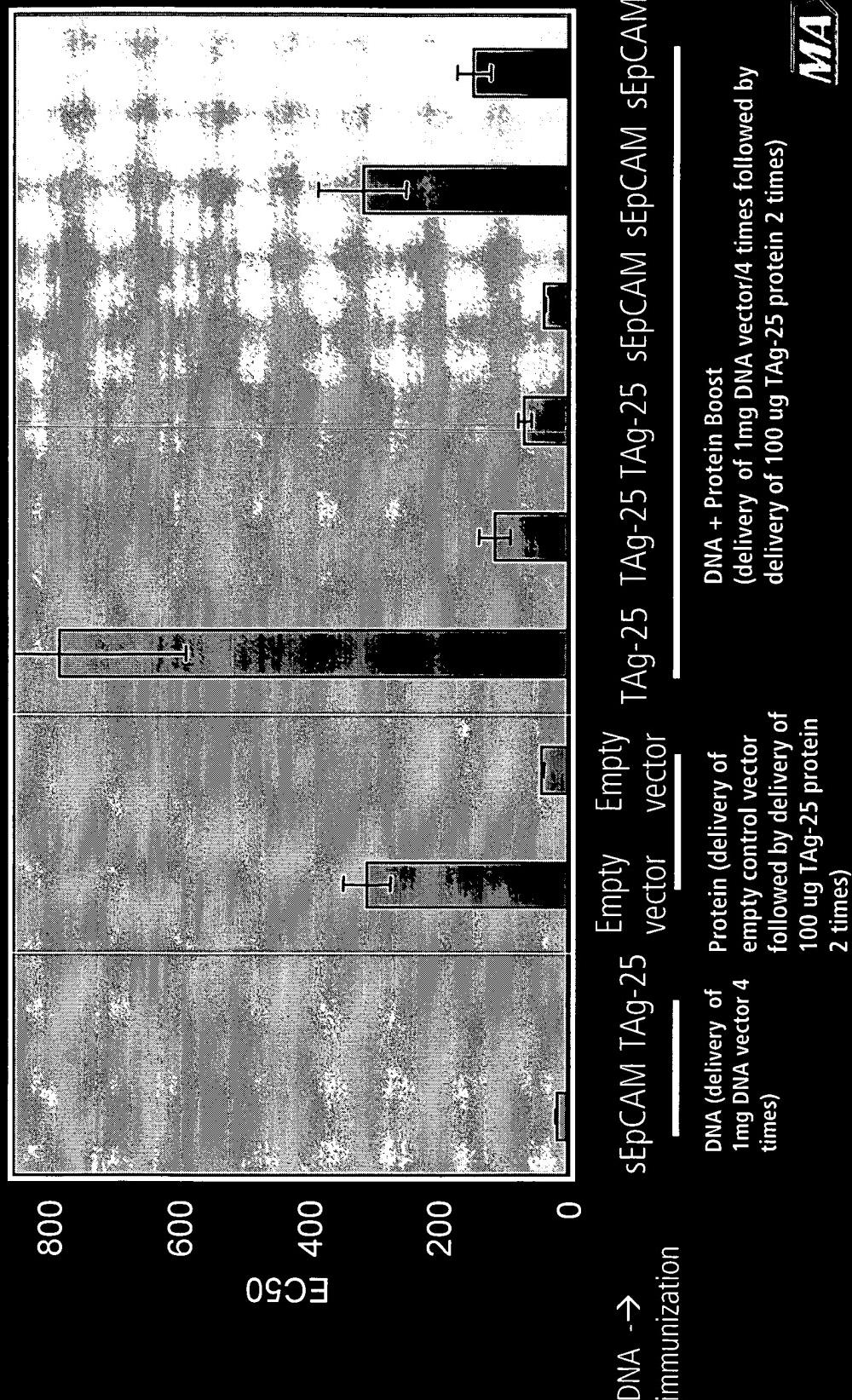


Reciprocal Serum Dilution after 4th immunization with DNA vector (1 mg/per dose)

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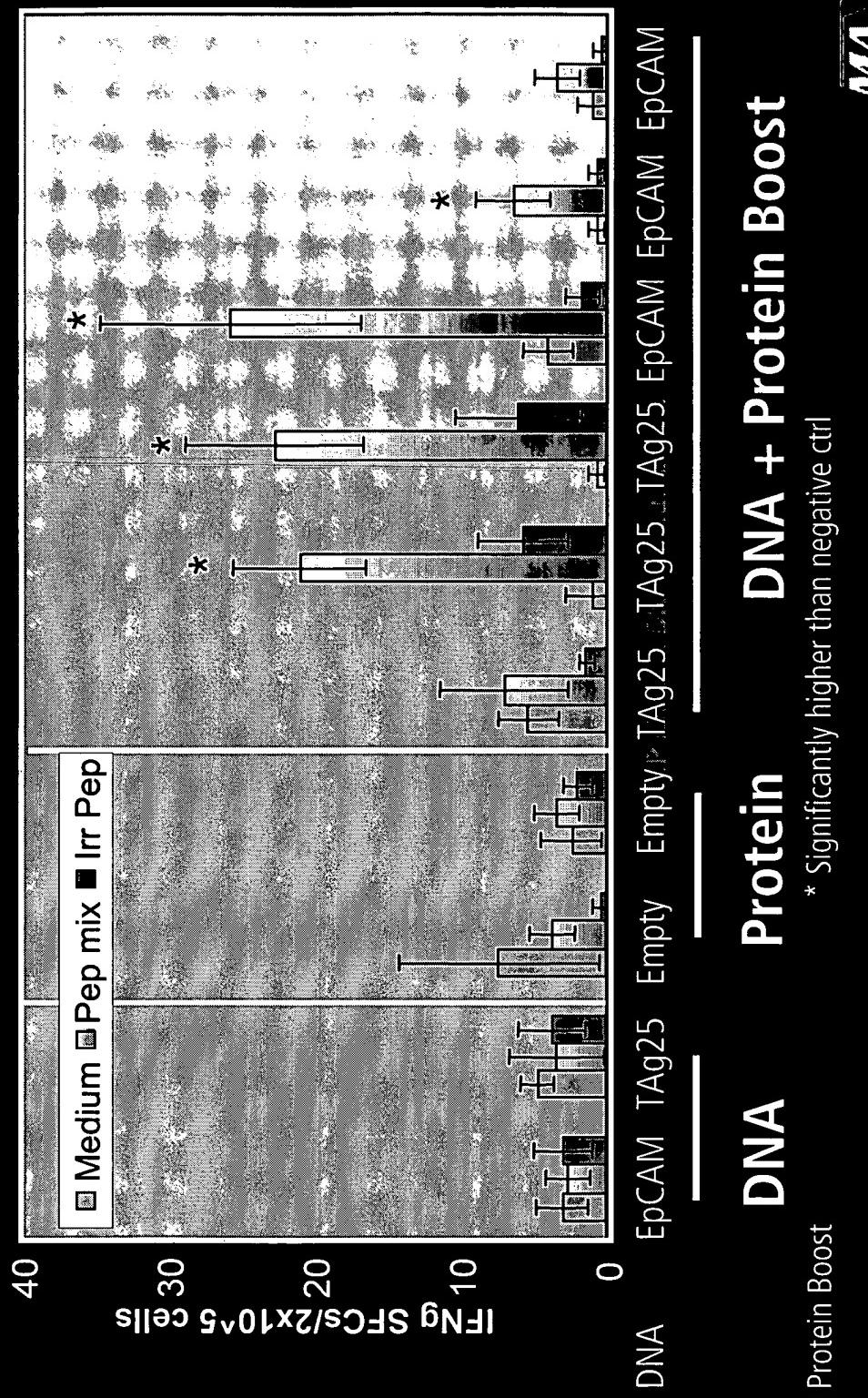
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Figure 13



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Figure 14

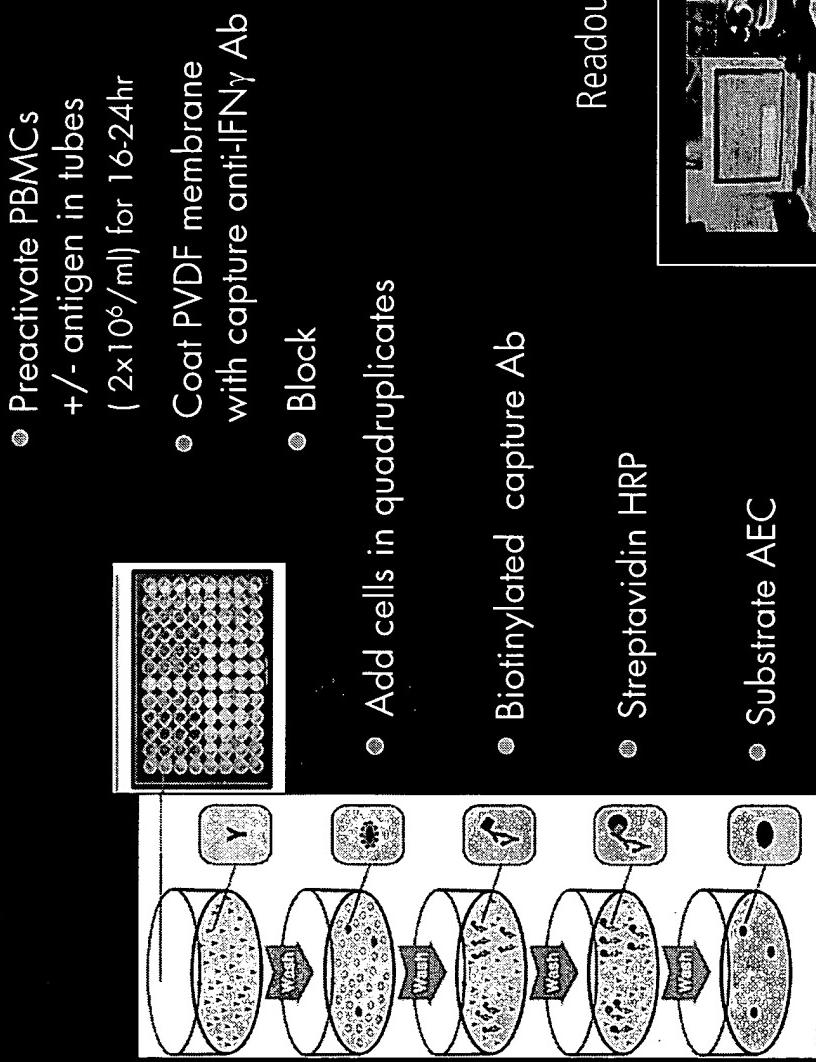


After Last Protein Boost

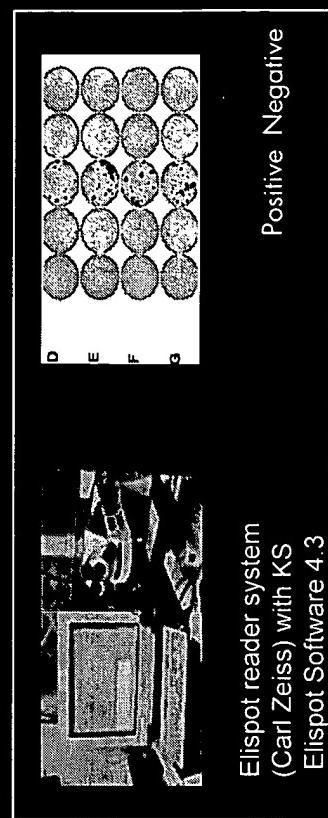
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Figure 15



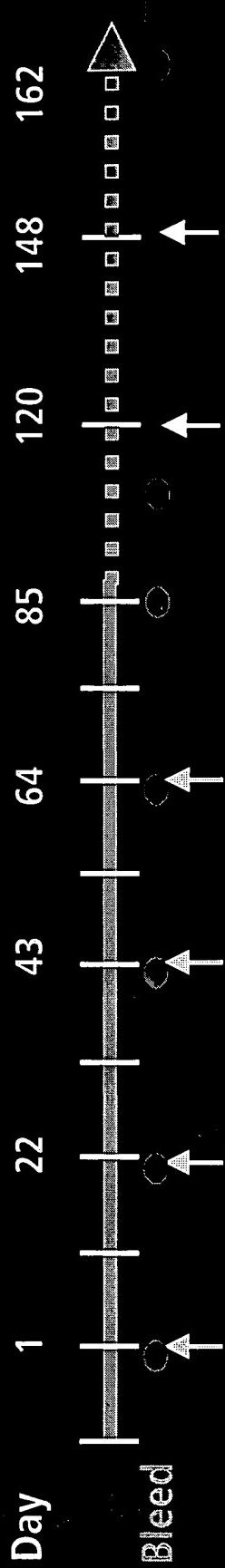
Readout: IFN γ Spot Forming Cells



Elispot reader system
(Carl Zeiss) with KS
Elispot Software 4.3

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Figure 16



2mg DNA 4x every 3 wks

DNA immunizations (n=5):

- Empty vector i.m. or i.d.
- TAG25 i.m. or i.d.
- TAG25/hB7.1 i.m. or i.d.
- TAG25/CD28BP i.m. or i.d.
- TAG25 + control DNA i.m.
- TAG25 + hB7.1 i.m.
- TAG25 + CD28BP i.m.

**100ug TAG25 protein in 2mg Alum
2x every 4wks; i.m.**

Given to 20 monkeys previously
treated with DNA i.d.



Animal Species:
Macaca fascicularis

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Figure 17

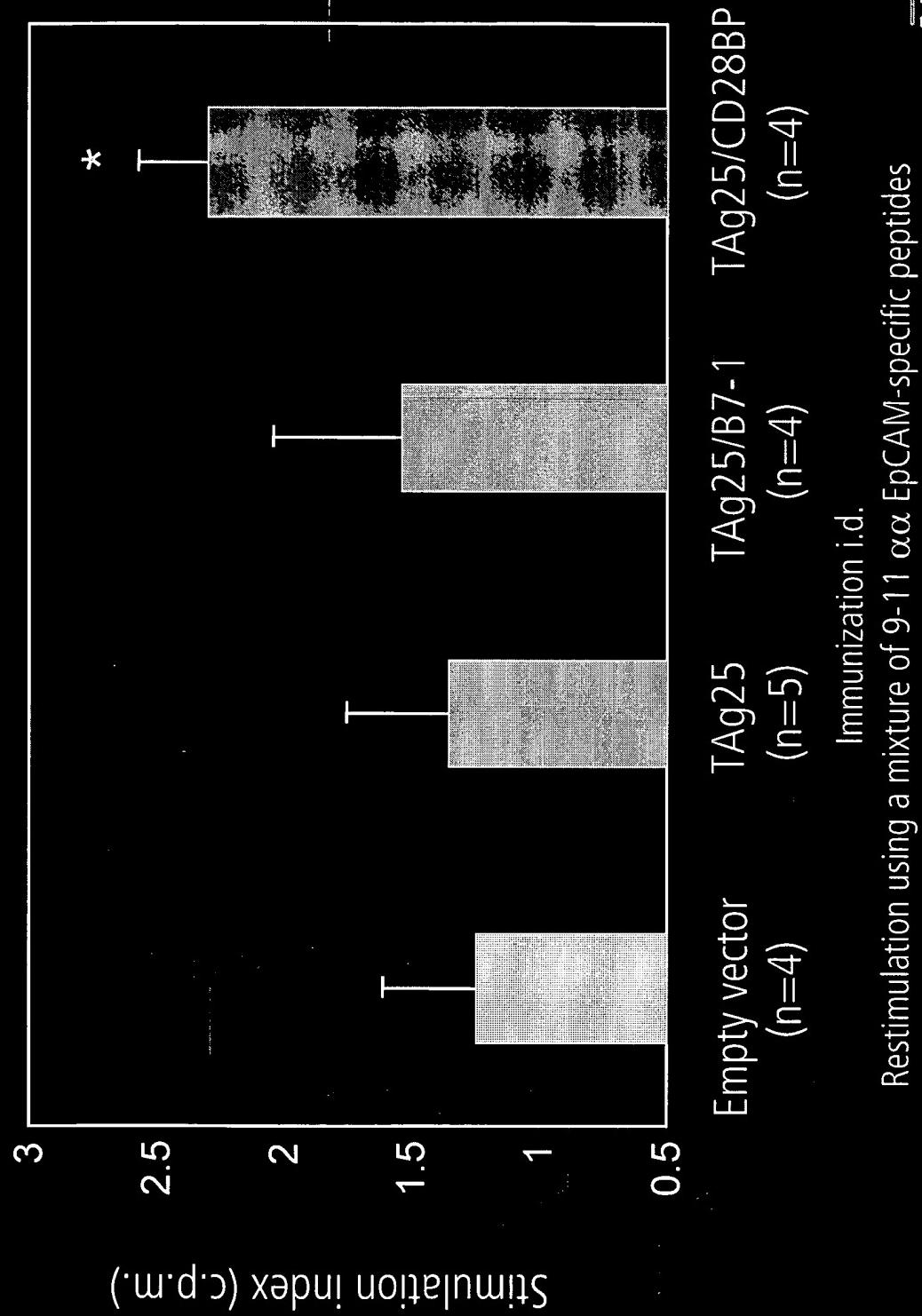


Figure 18

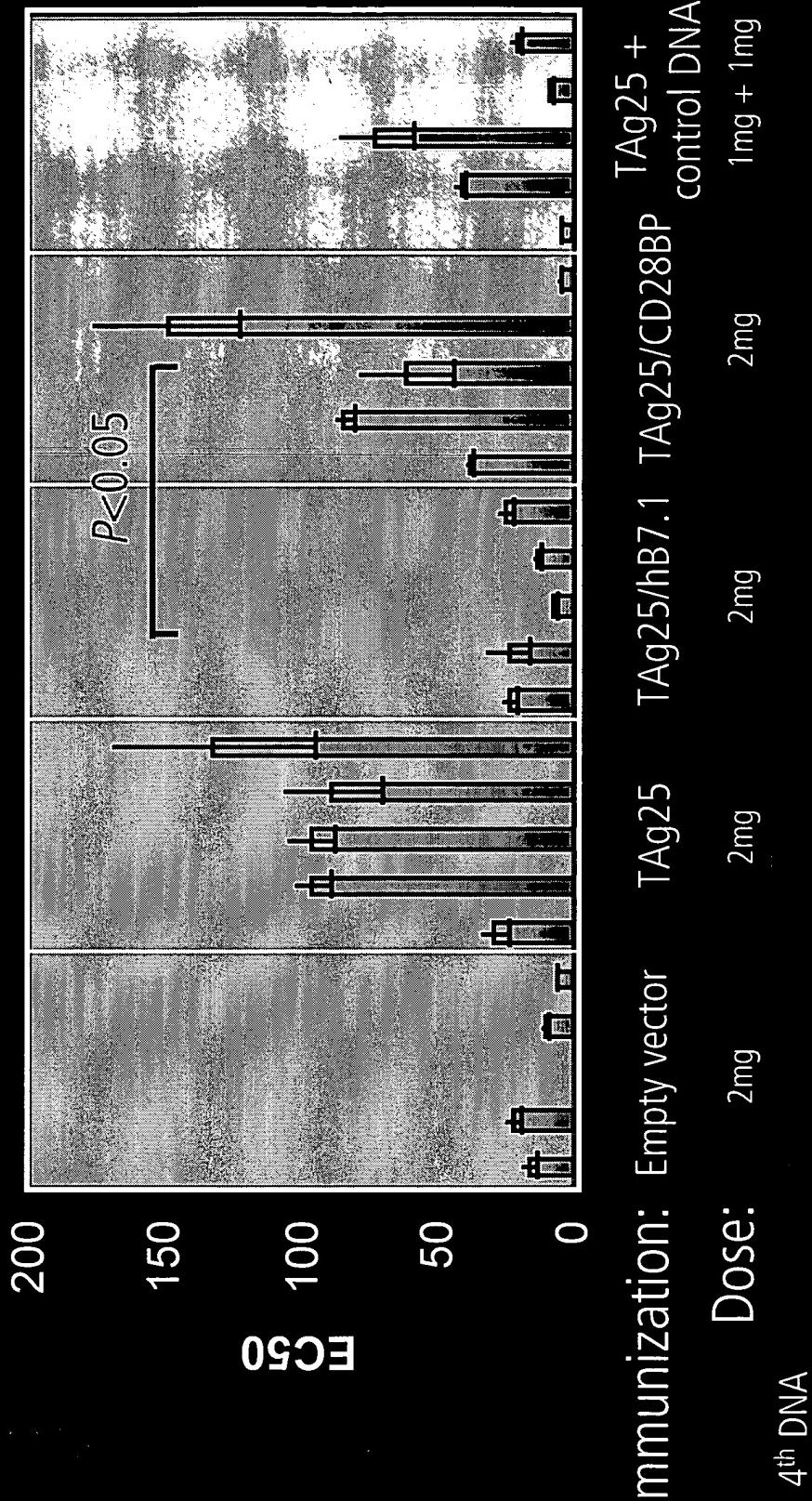
Vaccine	Antigen-specific Response	CD4 T Cell *	CD4 & CD8 T Cell **
Empty vector		0/5	0/5
TAG25		1/5	0/5
TAg25/B7-1		0/5	0/5
TAg25/CD28BP		3/5	2/5

* Number of animals positive when restimulated with TAG25
** Number of animals that are positive for restimulation with both TAG25 and EpCAM peptide mixture in separate cultures
> 10 spots above background is considered positive

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Figure 19



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Figure 20

